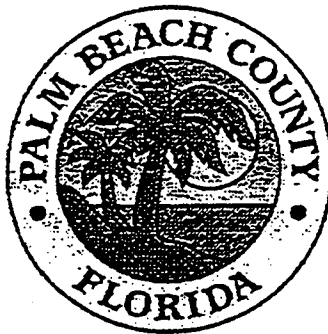


APPENDIX D
ENVIRONMENTAL SITE ASSESSMENT

PHASE I ENVIRONMENTAL SITE ASSESSMENT

for

Peanut Island
Lake Worth Inlet



prepared by:
Palm Beach County
Environmental Resources Management
Environmental Review & Natural Areas Division

prepared for:
U.S. Army Corps of Engineers

November 1997

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1.0 SUMMARY

The Palm Beach County Department of Environmental Resources Management (ERM) has completed a Phase I Environmental Site Assessment (ESA) for the parcel of land located in the north-central Lake Worth Lagoon known as Peanut Island. The island comprises approximately 79 acres and is bordered to the east by the Lake Worth Inlet and to the west by the Atlantic Intracoastal Waterway. The island is a spoil island originally created in 1918, by the excavation of a channel between Lake Worth and the ocean. The periodic dredging of the Intracoastal Waterway and turning basins of the Port of Palm Beach occasionally contributes to the addition of spoil on the island. Exotic vegetation such as the Australian pine and Brazilian pepper are the dominant vegetation on site. A small community of mangroves and cabbage palms are found on the northwestern side of the island. A project plan for Peanut Island includes the creation of a maritime hammock, a shallow-water snorkeling reef, additional mangrove areas and other site improvements. The site is located in Range 43, Township 42, and Section 34.

A review of historical sources indicated that the only development on the site was the U.S. Coast Guard Station and Kennedy Bunker located on the southern end of the island. Electricity and potable water are currently provided at the southern end of the island.

Minor amounts of nonhazardous litter, two derelict boats and a vagrant campsite were observed on the beach areas of the island. The island is composed of fill and no subsurface explorations were conducted, therefore, buried debris or materials were not observed on the site. Based on the prior reported land uses of the island it is not likely that buried debris or materials will be found on the site.

The subject site was examined for "Recognized Environmental Conditions" in accordance with American Society of Testing and Materials (ASTM) Standard 1527-94. This assessment revealed no evidence of recognized environmental conditions in connection with the subject parcel.

2.0 INTRODUCTION

2.1 PURPOSE

The purpose of this investigation was to determine if there are any potential or existing environmental concerns associated with the subject site including; the presence of hazardous materials, the existence of soil or groundwater contamination, and the presence of environmental conditions or features that may be considered "Recognized Environmental Conditions" in accordance with the American Society of Testing and Materials (ASTM) Standard 1527-94. A Recognized Environmental Condition is defined as:

"The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with the laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies" (ASTM Standard 1527-94, 1994).

2.2 SCOPE OF WORK

Phase I environmental site assessments typically provide current and historical information on land use and site conditions. This Phase I environmental site assessment included the following activities.

- ☐ Review of historical sources for evidence of prior land use which could result in soil or groundwater contamination.
- ☐ Review of regulatory agencies' enforcement and permitting records for indications of prior or existing contamination.
- ☐ Review of current and historical aerial photographs of the site and surrounding area.

- ☐ Review of published geologic information.
- ☐ Inspection of the property and surroundings.
- ☐ Interview with persons possessing knowledge of the property.

2.3 LIMITATIONS

ERM's environmental site assessment was limited to site conditions encountered on the day(s) of inspection, a review of reasonably ascertainable and relevant data, and information provided by outside parties and regulatory agencies. This assessment does not include subsurface explorations or laboratory analysis of soil or water. Environmental issues concerning buildings or structures such as asbestos containing materials and lead-based paint were not included in the focus of this assessment.

3.0 PHASE I ENVIRONMENTAL SITE ASSESSMENT

3.1 SITE DESCRIPTION

The subject site is an island only accessible by boat. The island is oblong-shaped and approximately 79 acres in size. The former location of the United States Coast Guard occupies the southeastern end of the island and a semi-active dredging operation is found on the southwestern side of the island. Florida Power and Light (FPL) transmission lines run east and west on the southern third of the island. Australian pine trees and Brazilian pepper cover most of the island, although a small community of cabbage palm trees and mangroves are found on the northwestern side of the island. The terrain of the site is uneven and hilly.

3.1.1 Site Location

The subject site is located in Range 43, Township 42, and Section 34. The site is located within the north-central Lake Worth Lagoon, bordered to the east by the Lake Worth Inlet and to the west by the Atlantic Intracoastal Waterway. The Blue Heron Boulevard bridge is located north of the island. A site location map is presented in Appendix A, Figure A-2.

3.1.2 Regional Hydrogeology

The island is a manmade land mass which does not exhibit the typical aquifer characteristics found in southern Florida. Rainwater collects on the island and seeps down to available ground space. The saltwater surrounding the island similarly fills all available space from below. Due to the differing densities of freshwater and salt water, mixing does not readily occur and a "hydrostatic balance" is established at the fresh and salt water interface (Ghyben-Herberg Relationship).

3.1.3 Physical Setting

The subject site is seen on the Riviera Beach Quadrangle topographic map. The U.S. Geological Survey (U.S.G.S) 7.5 minute topographic map (Appendix A, Figure A-2) indicates that the highest elevation on site is approximately 22-feet above sea level. This elevation occurs at the central spoil staging area which is west of the Coast Guard Station. The initial publication of the map was 1945, photorevised in 1983. Elevations on the island may vary from the topographic map since spoil is occasionally deposited on the island.

3.1.4 Palm Beach County Wellfield Zone

The subject site is not located in a designated wellfield protection zone delineated on the May 1997, Palm Beach County Wellfield Zones of Influence Maps. Potable water is supplied by Riviera Beach to the island via an underwater pipeline originating from the Port of Palm Beach.

3.1.5 Soil Types

The soils on site are classified as Quarzipsamments, Shaped (QAB). These soils are described as sandy fill material, hauled in from other sources. These soils drain well and have a low organic content.

3.2 SITE INSPECTION

A site inspection was conducted by Graham Chantler and Karen Larson of ERM on October 9, 10, and 13, 1997. The subject site was inspected by a walk-through. The shoreline area, established trails, an FPL utility corridor, and areas off trails were inspected. The buildings comprising the former Coast Guard Station and Kennedy Bunker were also inspected. Photographs of the site are presented in Appendix B.

3.2.1 Current Property Use

The subject site is undeveloped with the exception of the southern end of the island where the former United States Coast Guard Station and Kennedy Bunker are located. Boaters occasionally moor at the north and eastern ends of the island for picnicking, swimming or snorkeling. Two picnic tables and a few trash barrels are located on the northeast side of the island. The trash barrels are periodically emptied by the Palm Beach County Parks and Recreation Department. A small vagrant campsite consisting of tents, chairs, a makeshift restroom and old boats are found on the north end of the island. Minor litter was observed around the entire island. All debris observed appeared nonhazardous.

A semi-active dredging operation is located just northwest of the Coast Guard Station. The dredged material or spoil from the occasional dredging of the Lake Worth Inlet and the Port of Palm Beach turning basins and slips is deposited on the island.

All buildings at the former Coast Guard Station were inspected. The station is no longer an active Coast Guard Station. The station buildings including the Kennedy Bunker will be converted into a maritime museum.

3.2.2 Current Uses of Adjoining Property

There are no bridges connecting Peanut Island to other adjacent parcels of land. However, the Port of Palm Beach is southeast of the site across the Intracoastal Waterway. Several marinas are located north of the Port of Palm Beach. Singer Island is located northeast of the island and Palm Beach is located southeast of the island. There are no adjacent land uses which appear to have caused or contributed to recognized environmental conditions on the subject site.

3.2.3 Past Uses of Property

Based on a review of historical aerial photographs and the topographic map, it appears that the subject site has never supported development other than the U. S. Coast Guard Station, Kennedy Bunker and the dredging operation. Historical information indicates that the island was created from spoil during 1918 and the Coast Guard Station was built on the island during 1936.

3.2.4 Hazardous Substances

Hazardous substances, were not observed on the subject site.

3.2.5 Hazardous Substance Containers

Hazardous substance containers were not observed on the subject site.

3.2.6 Solid Waste

Minor litter was observed on the subject site. Two rusted barges (approximately 30 x 15 feet in size) were observed on the western side of the island. Outside the western fence line of the Coast Guard Station, discarded lumber, cut vegetation and an old discarded cooler from a boat were found. Rusted pieces of metal and glass bottles were found on the eastern side of the island under the Florida Power and Light utility lines. All litter and debris observed appeared nonhazardous.

3.2.7 Pollutant Storage Tanks

One aboveground pollutant storage tank is located on the property of the former Coast Guard Station. The tank is in secondary containment and did not appear to be leaking. Pollutant storage tank facilities located near the subject site are discussed in Section 3.4.5.

3.2.8 PCBs

The electrical transformers observed on the subject site were in good condition and not rusting or leaking. No other equipment likely to contain PCBs was observed on the subject site.

3.3 HISTORICAL INFORMATION

In order to assist in identifying past uses of the subject property and surrounding areas, historical aerial photographs and a topographic map were reviewed.

3.3.1 Aerial Photograph Review

Historical aerial photographs dated 1965, 1971, 1977, and 1984 were reviewed for the subject site. All aerials were obtained from the Palm Beach County Department of Engineering reprographics office. Observations based on this aerial photographic record are as follows:

- ☐ 1965 The Coast Guard Station is seen on the southern end of the island. There is a cleared area on the north end of the island with trails connecting to the Coast Guard Station. Two barges are seen moored on the west side of the island. Vegetation covers most of the remaining areas of the island.
- ☐ 1971 The entire central portion of the island is void of vegetation and covered with fill. The buildings at the Coast Guard Station appear unchanged. Two barges are seen on the western side of the island.
- ☐ 1977 Vegetation has grown in the central area of the island. The western coastline of the island appears to have been filled. A Quonset hut previously seen on the Coast Guard property no longer appears. The concrete footprint of the building is visible.

RCRIS was also reviewed for facilities that generate hazardous waste located on subject property. No RCRIS sites were identified on the subject site.

3.4.5 Federal TRI List

TRI is a database used to store information on notifications about releases of more than 650 toxic chemicals and compounds to the environment. TRI was reviewed for releases occurring within a 0.5-mile radius of the subject site. No TRI sites were identified within the search radius.

3.4.6 DEP Stationary Tank Inventory

The Florida Department of Environmental Protection's STI list of pollutant storage tanks facilities was reviewed for pollutant storage tank sites and petroleum contaminated sites within a 0.5-mile radius. One registered storage tank site was found on Peanut Island. There is a 500 gallon aboveground fuel tank located on the Coast Guard property. The tank is used to supply an emergency generator. File information reviewed indicates that there are no records of releases or discharges from the aboveground tank. There was also a small above ground oil/water separator tank located at the Coast Guard Station. The oil/water separator was used to contain oily bilge water pumped out of Coast Guard boats. During December 1994, an assessment was conducted to determine the extent of soil contamination surrounding the separator on the Coast Guard property. Soil contamination was found west of the tank, and the tank and approximately 35 tons of excessively contaminated soils were removed from the site. Petroleum contamination identified at this site has been remediated and would not be considered a recognized environmental condition.

Several petroleum contaminated sites are located within the 0.5-mile search radius. Since all of the sites are separate from the subject site by water, they would not be an environmental concern for the subject site.

3.4.7 Solid Waste Authority (SWA) Inventory of Solid Waste Sites

The SWA Inventory of Solid Waste Sites is a compilation of information obtained from numerous sources concerning the location and disposition of solid waste sites in Palm Beach County. These sites include dumps, landfills, solid waste management facilities, waste transfer stations, selected hazardous waste spills, burial sites, and sludge land application sites. No solid waste sites were located within the search distance.

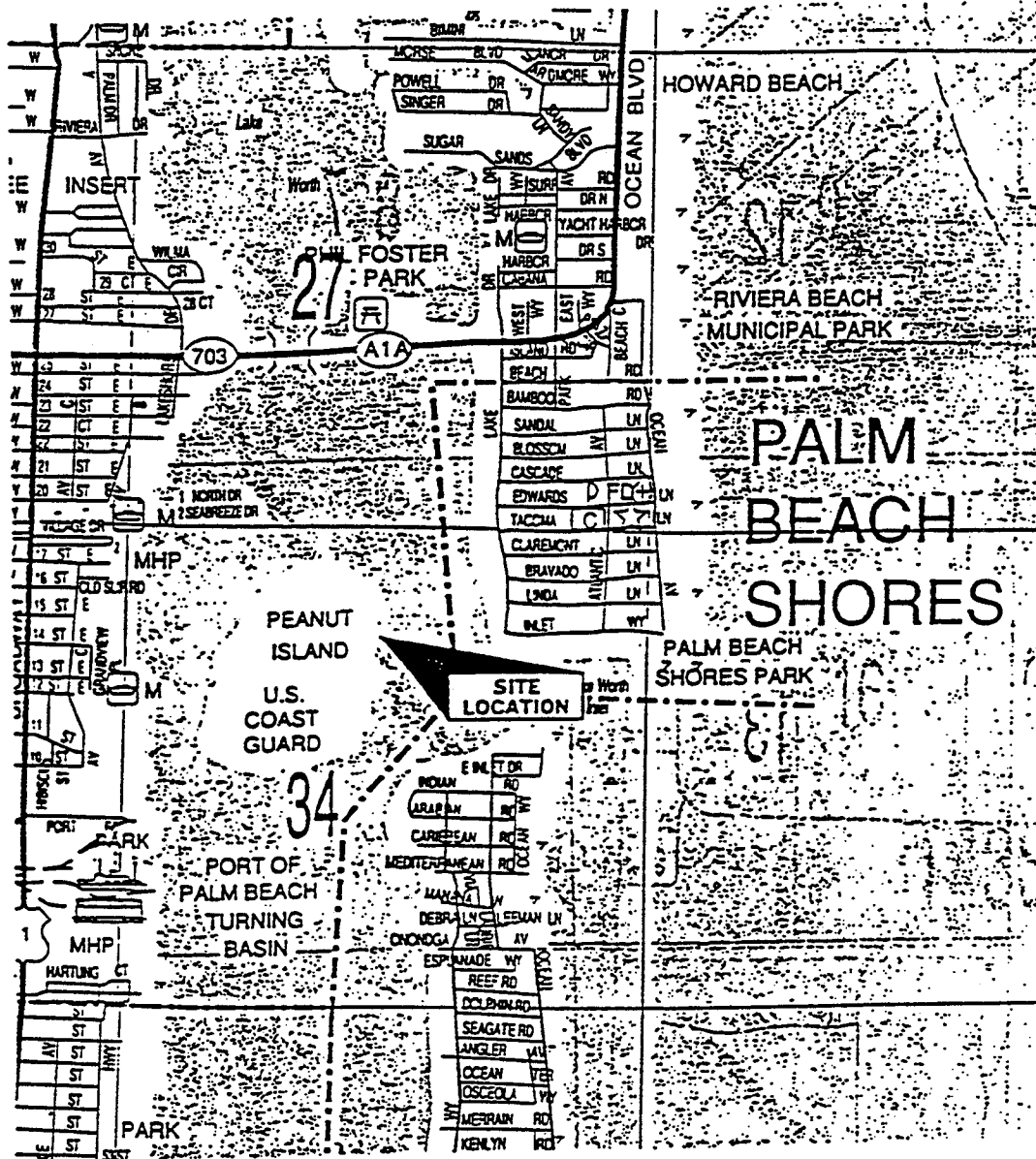
4.0 CONCLUSIONS AND RECOMMENDATIONS

The Palm Beach County Department of Environmental Resources Management has performed a Phase I Environmental Site Assessment for a parcel of land located in the north-central Lake Worth Lagoon known as Peanut Island.

Minor litter was observed around the entire island. Two rusted barges, pieces of metal, glass bottles, discarded lumber, cut vegetation and an old discarded cooler from a boat were found. Additionally a small vagrant campsite consisting of tents, chairs, a makeshift restroom and old boats were found on the north end of the island in the area planned for restoration. All observed litter and debris appeared nonhazardous.

The subject parcel was examined for "Recognized Environmental Conditions" in accordance with American Society of Testing and Materials (ASTM) Standard 1527-94. This assessment revealed no evidence of recognized environmental conditions in connection with the subject parcel. Based on a review the available information and on-site inspections, no additional investigation of the area for soil or groundwater contamination appears necessary at this time.

**APPENDIX A
LOCATION MAPS**

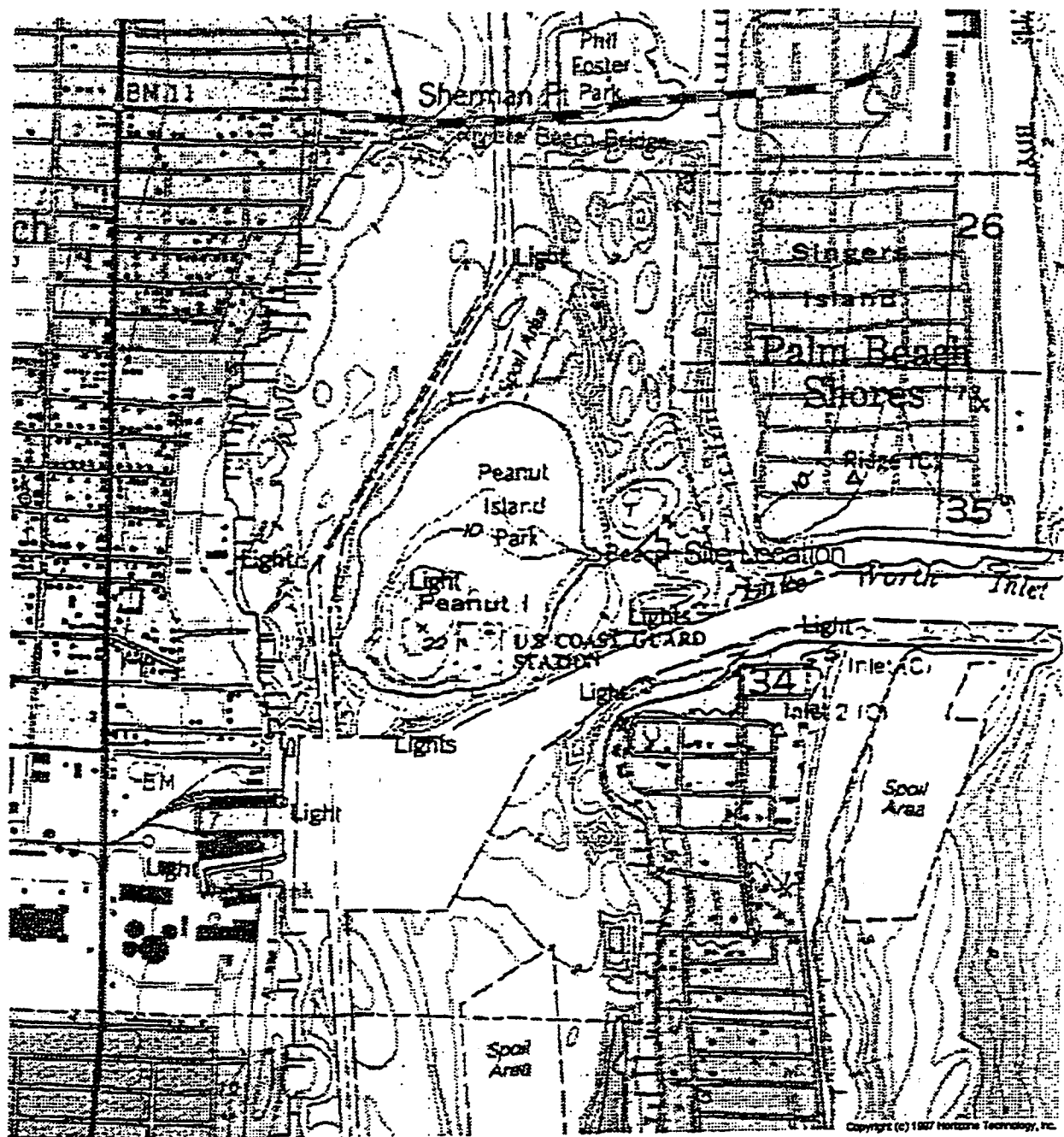


PHASE I ENVIRONMENTAL SITE ASSESSMENT Peanut Island

Figure A-1

Palm Beach County
Department of Environmental Resources Management
Environmental Review & Natural Areas Division

Date: November 1997

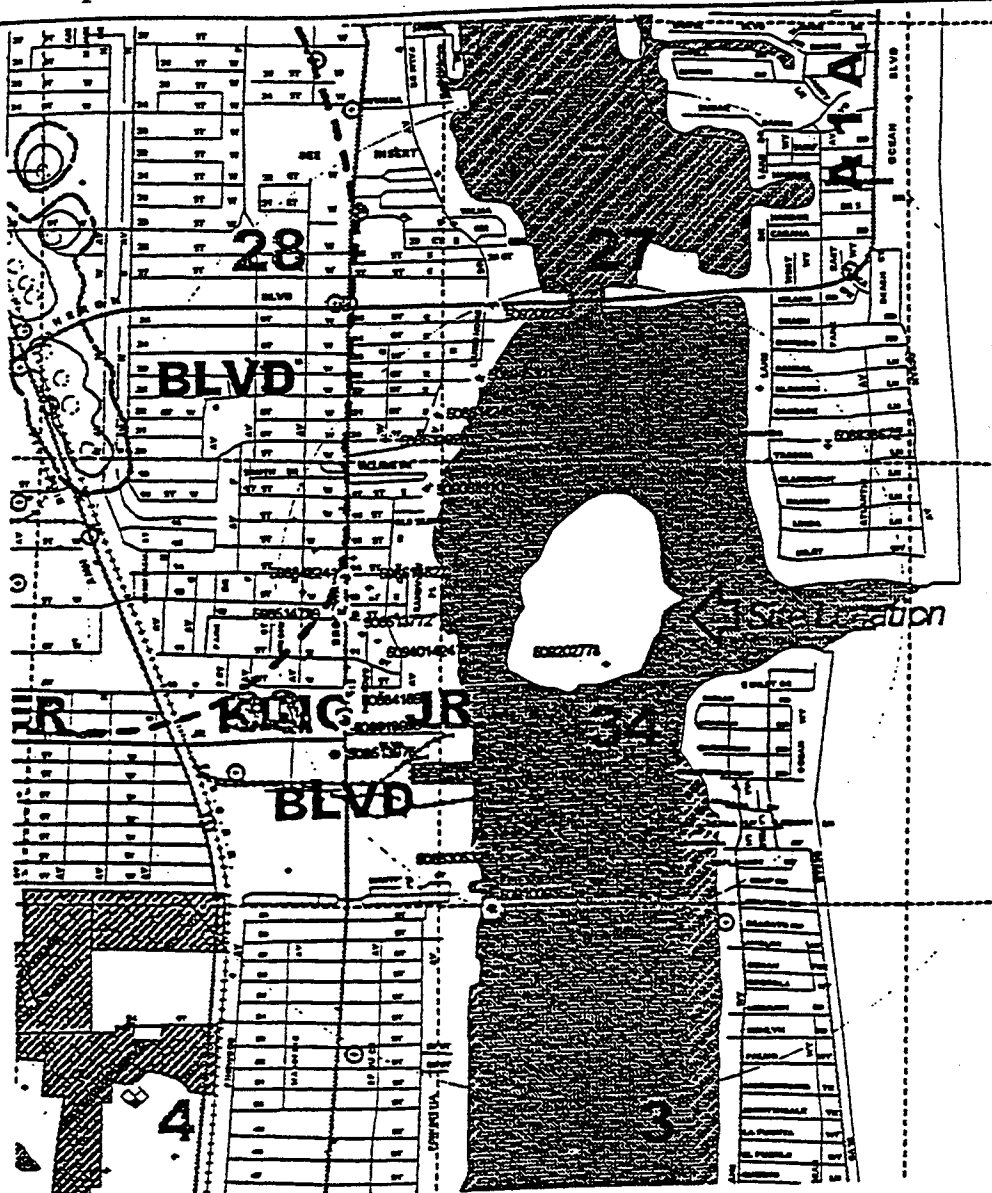


Phase I Environmental Site Assessment for Peanut Island

FIGURE A-2

prepared by:
Palm Beach County
Department of Environmental Resources Management
Environmental Review & Natural Areas Division

November 1997



Sites located within search radius are shown in magenta and labeled.
Areas within municipal limits are shaded in yellow.

- Petroleum Cleanup Sites
- Registered Storage Tanks
- ◇ Solid Waste Sites
- ◇ CERCLIS
- ◇ Treatment, Storage and Disposal (RCRA)
- ◇ National Priorities List

- Environmentally Sensitive Lands**
- Not Preserved ESL
 - Exempt
 - Publicly Owned Preserves
 - Privately Owned Preserves
 - Proposed Acquisition Sites
 - County Bond Purchased ESL

**Wellfield Protection
Zones of Influence**

- Zone 1
- Zone 2
- Zone 3
- Zone 4

⊕ Non-transient/Non-community PWS Wells

Notes: The information presented represents the most readily available data.
No guarantee is made as to the completeness or accuracy of the information displayed.
Consult appropriate County Staff for final determination.

0.1 0 0.1 0.2 0.5 Miles



PHASE I ENVIRONMENTAL SITE ASSESSMENT

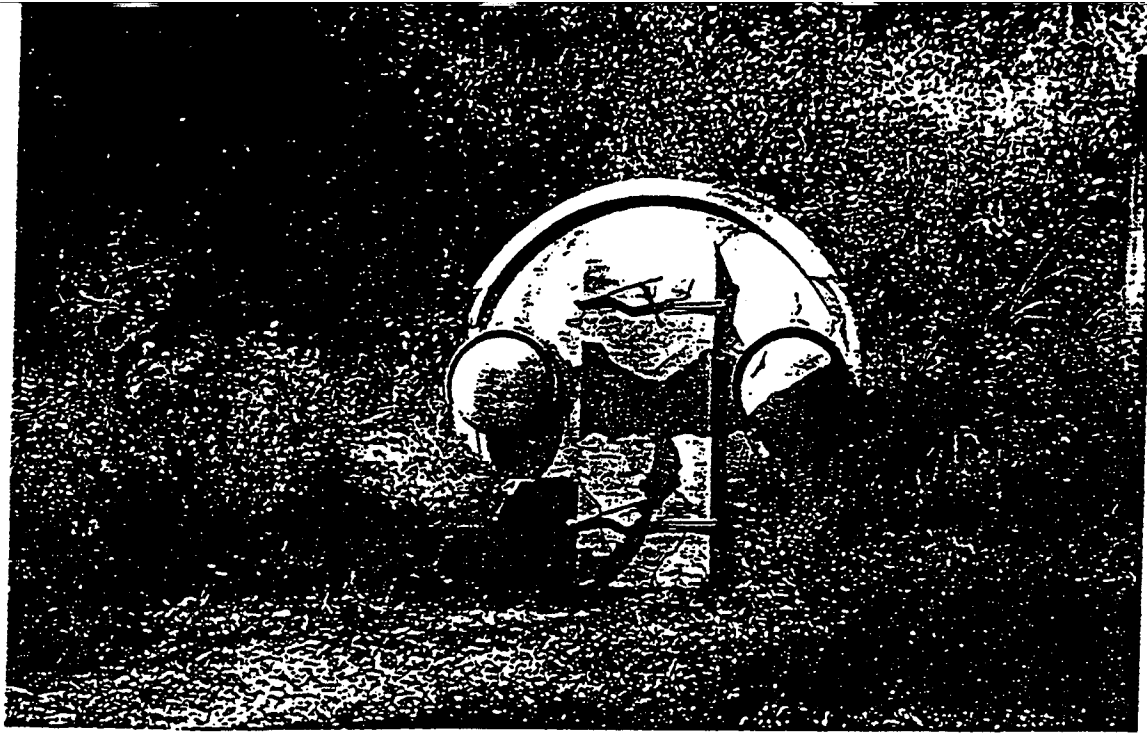
Peanut Island

Figure A-3

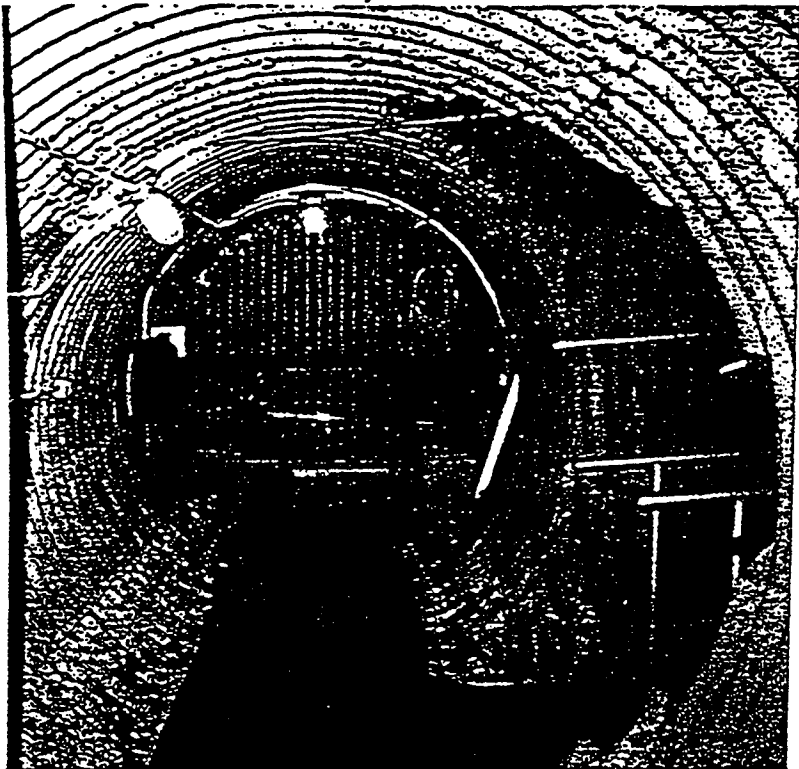
Palm Beach County
Environmental Resources Management
Environmental Review & Natural Areas Division

November 1997

APPENDIX B
PHOTOGRAPHS



Entrance to Former Kennedy Bunker I



Inside Former Kennedy Bunker I

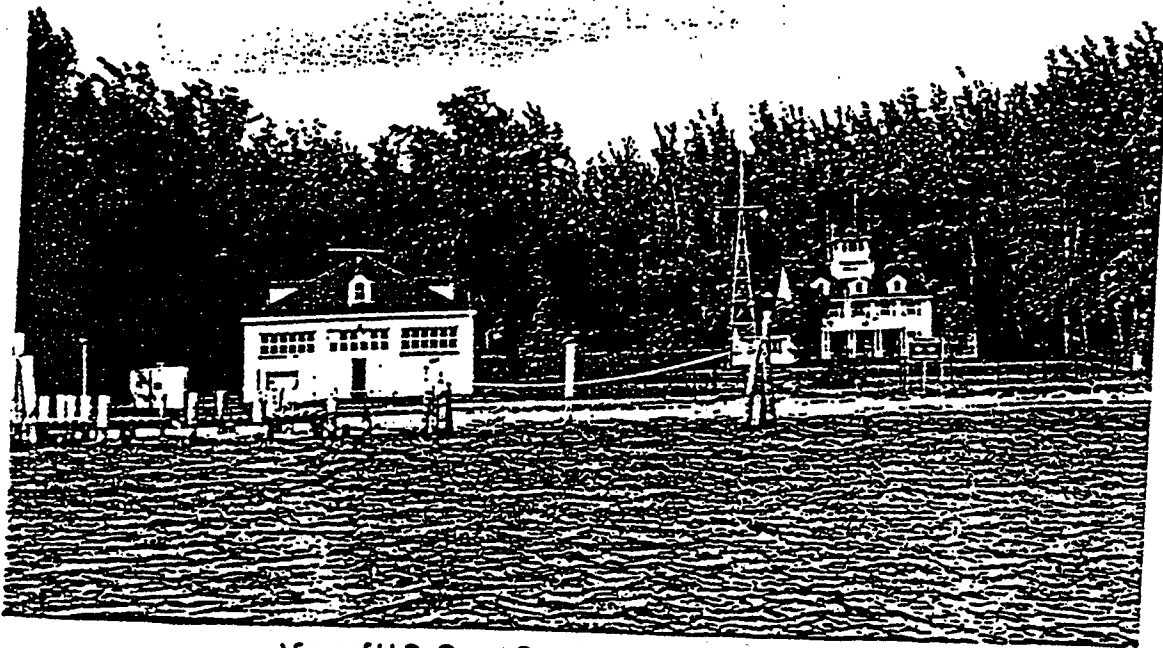


PHASE I ENVIRONMENTAL SITE ASSESSMENT
Peanut Island

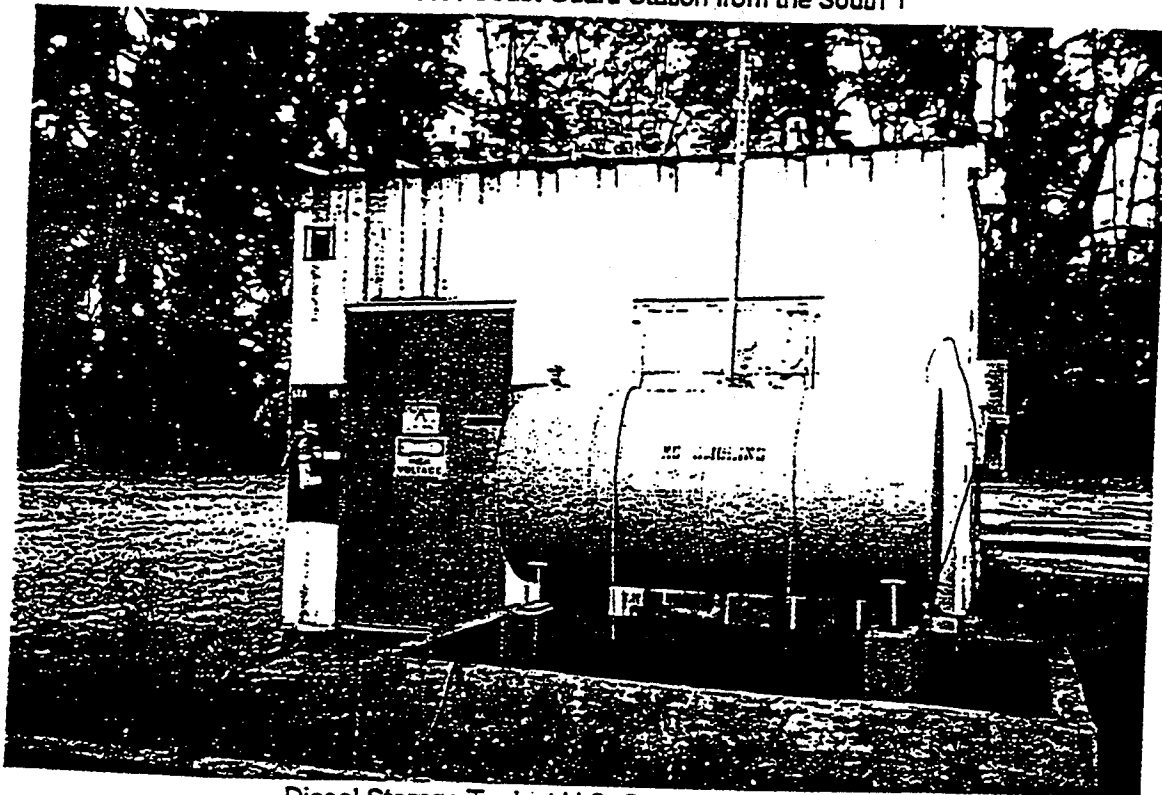
Figure B-1

Palm Beach County
Department of Environmental Resources Management
Environmental Review & Natural Areas Division

Date: November 1997



View of U.S. Coast Guard Station from the South I



Diesel Storage Tank at U.S. Coast Guard Station I

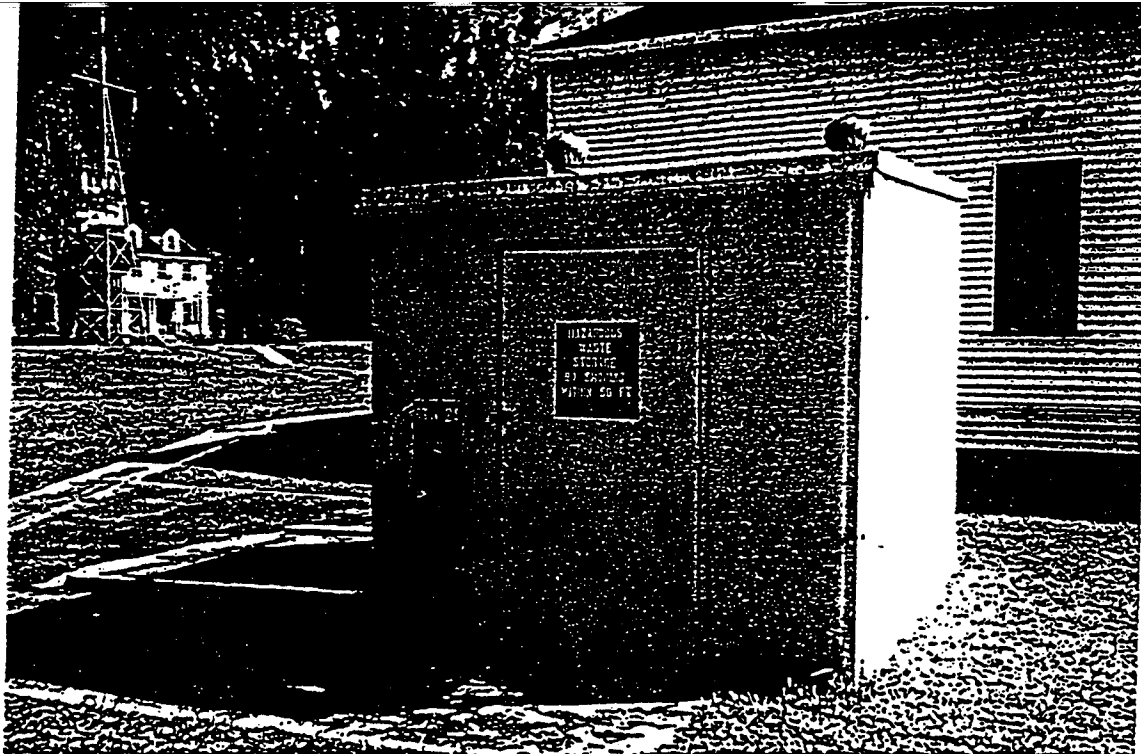


PHASE I ENVIRONMENTAL SITE ASSESSMENT Peanut Island

Figure B-2

Palm Beach County
Department of Environmental Resources Management
Environmental Review & Natural Areas Division

Date: November 1997



Hazardous Waste Storage Area on U.S. Coast Guard Station I



Paint Storage Area at U.S. Coast Guard Station I

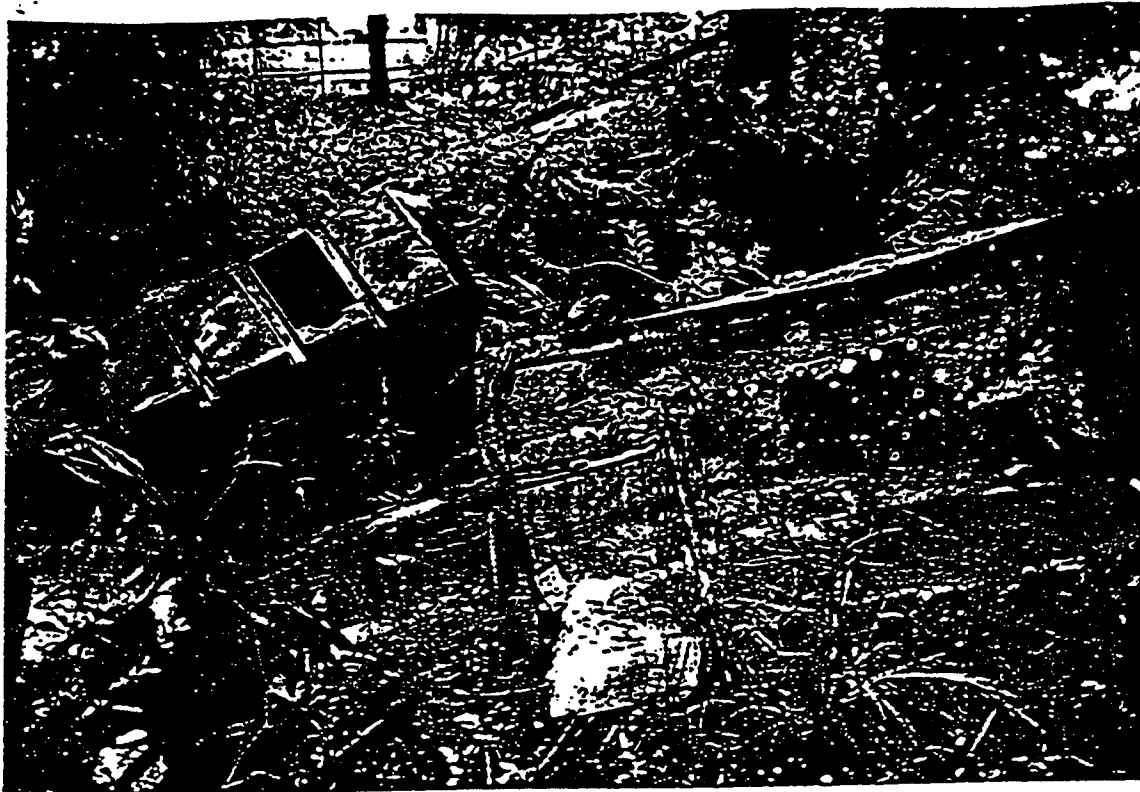


PHASE I ENVIRONMENTAL SITE ASSESSMENT Peanut Island

Figure B-3

Palm Beach County
Department of Environmental Resources Management
Environmental Review & Natural Areas Division

Date: November 1997



Trash Mound adjacent to U.S. Coast Guard Station I



View of Central Spoil Staging Area I



PHASE I ENVIRONMENTAL SITE ASSESSMENT Peanut Island

Figure B-4

Palm Beach County
Department of Environmental Resources Management
Environmental Review & Natural Areas Division

Date: November 1997



Old Electrical Equipment in Utility Easement I



View of Homeless Camp on the North side of Island I



PHASE I ENVIRONMENTAL SITE ASSESSMENT Peanut Island

Figure B-5

Palm Beach County
Department of Environmental Resources Management
Environmental Review & Natural Areas Division

Date: November 1997



View Facing East along Utility Easement 1



View of West Side of Island Facing East 1



PHASE I ENVIRONMENTAL SITE ASSESSMENT Peanut Island

Figure B-6

Palm Beach County
Department of Environmental Resources Management
Environmental Review & Natural Areas Division

Date: November 1997